

Amendments to the Specification:

Please replace paragraph number [0015] as filed or paragraph number [0012] as published, within the subject patent application, as follows:

In one aspect, the invention relates to an apparatus for performing multiple procedures involving the eye. The apparatus comprises at least one imager for imaging at least a portion of an eye of a patient, the at least one imager configured to provide image data comprises at least two data types selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence tomography data, thermal image data, spectroscopic image data, refractometry data, and visible image data and a data analysis module that interrelates data from the at least two data types to provide a interpretive result.

Please replace paragraph number [0020] as filed or paragraph number [0017] as published, within the subject patent application, as follows:

In some embodiments, the apparatus further comprises a display for displaying the superimposed data obtained from at least two images. In some embodiments, the superimposed data obtained from at least two images comprises data obtained from at least two different data types selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence tomography data, thermal image data, spectroscopic image data, and visible image data. In some embodiments, the apparatus further comprises a memory for storing image data. In some embodiments, the memory for storing image data is configured to store and to selectively retrieve data from at least one image for determining changes induced in response to an applied stress. In some embodiments, the applied stress is selected from the group consisting of intra ocular pressure variation, blood pressure variation, oxygen concentration variation, exercise, flashing light, drug administration, administration of insulin, and administration of glucose. In some embodiments, the memory is configured to store and to selectively retrieve data from at least one image for determining a time evolution of changes induced in response to an applied stress. In some embodiments, the memory for storing image data is configured to selectively retrieve data from at least one image

for trending analysis purposes. In some embodiments, the memory for storing image data is configured to archivally store image data.

Please replace paragraph number [0035] as filed, or paragraph number [0032] as published, within the subject patent application, as follows:

In one embodiment, the image data comprises a data type selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence tomography data, thermal image data, spectroscopic image data, refractometry data, and visible image data. In one embodiment, the neurological disorder is selected from the group consisting of glaucoma, macular degeneration, diabetic retinopathy, Parkinson's disease, Alzheimer's disease, dyslexia, multiple sclerosis, optic neuritis, LDS, head trauma, diabetes, and inappropriate responses to contrast sensitivity patterns.

Please replace paragraph number [0045] as filed, or paragraph number [0042] as published, within the subject patent application, as follows:

In a further aspect, the invention features a computer program recorded on a machine-readable medium. The computer program comprises a data analysis module that interrelates at least two data types, the at least two data types selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence tomography data, thermal image data, spectroscopic image data, refractometry data, and visible image data.

Please replace paragraph number [0047] as filed, or paragraph number [0044] as published, within the subject patent application, as follows:

In yet a further aspect the invention features a computer program recorded on a machine-readable medium. The computer program comprises a data analysis module that interrelates image data and data indicative of a neurological disorder, the image data comprises a data type selected from the group consisting of data from ophthalmic images using confocal microscopy

data, retinal polarimetry data, optical coherence tomography data, thermal image data, spectroscopic image data, refractometry data, and visible image data, and the data indicative of a neurological disorder selected from the group consisting of glaucoma, macular degeneration, diabetic retinopathy, Parkinson's disease, Alzheimer's disease, dyslexia, multiple sclerosis, optic neuritis, LDS, head trauma, diabetes, and inappropriate responses to contrast sensitivity patterns.

Please replace paragraph number [0048] as filed, or paragraph number [0045] as published, within the subject patent application, as follows:

In a further aspect, the invention relates to a method of diagnosis of a state of health of a patient. The method comprises the steps of imaging at least a portion of an eye of a patient to obtain image data comprises at least two data types selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence tomography data, thermal image data, spectroscopic image data, refractometry data, and visible image data; and interrelating the data from the at least two data types to provide a interpretive result.

Please replace paragraph number [0050] as filed, or paragraph number [0047] as published, within the subject patent application, as follows:

In still another aspect, the invention relates to a method of diagnosis of a state of health of a patient. The method comprises the steps of imaging at least a portion of an eye of a patient to obtain image data comprises a data type selected from the group consisting of data from ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence tomography data, thermal image data, spectroscopic image data, refractometry data, and visible image data, and data indicative of a neurological disorder selected from the group consisting of glaucoma, macular degeneration, diabetic retinopathy, Parkinson's disease, Alzheimer's disease, dyslexia, multiple sclerosis, optic neuritis, LDS, head trauma, diabetes, and inappropriate responses to contrast sensitivity patterns; and interrelating the image data and the data indicative of a neurological disorder to provide a interpretive result.

Please replace paragraph number [0070] as filed, or paragraph number [0065] as published, within the subject patent application, as follows:

The invention uses a combination of two or more observations, which can include an image of at least a portion of an eye of a patient, and a data set corresponding to a response from at least a portion of an eye of a patient. The two or more observations can comprise two images, an image and a data set, or two data sets. Images and data sets will be referred to generally as information, which should be understood as necessary to mean either images or data sets or both. The images include visualization of a portion of an eye, and can include ophthalmic images using confocal microscopy data, retinal polarimetry data, optical coherence tomography data, thermal image data, spectroscopic image data, refractometry data, and visible image data. The data sets include data that is indicative of neurological disorders. For example, the neurological disorders include glaucoma, macular degeneration, diabetic retinopathy, Parkinson's disease, Alzheimer's disease, dyslexia, multiple sclerosis, optic neuritis, and inappropriate responses to contrast sensitivity patterns. In some embodiments, the images are visible images that include color fundus photography and black and white fluorescein angiography.